Maryland Forest Conservation Goal-Setting Meeting Notes

March 28, 2007, 10-4

C-1 Conference Room, Annapolis, MD

Green Markets for Forest Conservation

The meeting focused on an array of opportunities for markets related to environmental services routinely provided by trees and forest land. Each market or mechanism has unique requirements for participation, are complex in itself, involves new terminology, and are at different stages of development. Powerpoint presentations (.pdf) are posted at http://www.dnr.state.md.us/forests/conservationgoal.asp.

Potential for Forest Conservation and Restoration in Water Quality Trading

Jim George from the Maryland Department of the Environment presented information on the broad legal mandates that would create demand for water quality markets: meeting water quality standards, maintaining the pollution caps, and protecting good quality water from degradation. The operational procedures currently under development include nutrient offsets for new point sources, Water Resource Elements for Comprehensive Land Use Plans, administration institutions (e.g., for water quality trading), and offsetting new nonpoint sources (like residential development).

Maryland has an array of laws and regulations that protect water quality, including the Critical Area Law, Forest Conservation Act, the non-tidal wetlands law, National Pollution Discharge Elimination System (NPDES) permits, and MS4 permits for Municipal Separate Storm Sewer System operations. For water quality, point sources piped out of industry or sewage treatment plants have been regulated for longer than non-point sources, runoff from the overall landscape. Point sources currently all have pollutant load caps. For non-point sources, identifying and controlling nutrients are more difficult. Nutrient offsets are being developed, but new non-point sources, like new development, are not typically tracked or offset by expanded controls on nutrients.

The Clean Water Act (CWA) sets standards, which are composed of designated uses, water quality criteria for each use, and an antidegradation policy. Water quality criteria are mandatory to meet, but use designations can take into account existing conditions and socioeconomic considerations. States are required to monitor waters and list impaired waters every 5 years, the 303(d) list. Where water bodies do not meet the standards for their designated uses, Total Maximum Daily Load limits must be developed, the pollutant or stressor limits that the water body is capable of assimilating without damage. TMDLs include point and nonpoint sources, plus a margin of safety. TMDL implementation occurs through permit mechanisms like NPDES permits and the stormwater equivalent, MS4 permits, where required. As land is developed, pollutant sources shift from non-point to point, and there is potential for conserving or including forests. A Delaware TMDL in the Inland Bays has required no increase in nutrient loading, generally met by having post-development nutrient loads be less than previous agricultural loads.

The CWA includes an antidegradation policy to protect high quality waters from being degraded to minimum standards. The high quality waters, or Tier II waters, have to be described in regulations, have a clear basis for designation; these could be part of a strategy to protect high priority streams or forests. Designations could potentially affect additions to water and sewer plans or changes to NPDES permits. Forest may be particularly relevant to meeting temperature standards, a factor commonly included in the 303(d) list in Oregon, but in Maryland. In Maryland, COMAR 26.08.02.03-3 states that it is the policy of the state to retain riparian forest buffers adjacent to Use III Nontidal Cold Waters to meet temperature standards.

Water quality impacts can be thought of as near-field, the physical stream degradation or biological impairments that occur right next to pollutant sources, and far-field, problems that are generated down-stream, like the eutrophication of tidal waters from excess nutrients.

TMDLs and water quality impairments can be addressed on a small scale like a pond, lake, or small area of stream network, or on a large scale like river basins. Emerging issues include whether permits for new uses will be prohibited until TMDLs are developed for impaired waterways, how to include stormwater allocations in NPDES permits, and different types of TMDLs, like trash, thermal, and biological impairments. Mechanisms to offset nutrient increases from new sources like land development are not clear. Maryland's requirements for local land use planning in HB 1141 provide some opportunity to consider water quality issues, such as in the Water Resources Element. There is potential for conserving existing forest in areas with limited source water, such as karst areas where groundwater is limited. Easements to maintain forest land use would allow a lower projected water demand in a potential service area for water supply. Development and implementation of an antidegradation policy for water quality standards could have implications for land use throughout a watershed.

Maryland Department of Agriculture is working on the nonpoint source aspects of Maryland's water quality trading program. The time frame for implementation is likely to be by the end of the year. Pennsylvania and Virginia have new water quality trading programs. Virginia's prioritizes point-to-point trades, allowing nonpoint credits, such as from afforestation, to be traded only where a point source trade cannot be made.

Carbon Sequestration- Will Price, Pinchot Institute

Will Price reviewed the numerous emerging markets for carbon sequestration in the U.S., including a national market (Chicago Climate Exchange), a developing regional market (Regional Greenhouse Gas Initiative, for the NE), and five state markets or registry (CA, GA, OR, NH, WI). Markets include a registry, protocol for counting carbon credits and eligibility, trading platform, and aggregators to make efficient trades. Carbon credits must meet tests for additionality (carbon stored is beyond business as usual), leakage, and permanence. Maryland is joining the Regional Greenhouse Gas Registry (RGGR), which has a cap and trade program scheduled to begin in 2009. Forest management credits are

not currently being considered for RGGR, although they can be in the Chicago market. For RGGR, afforestation projects are included, and projects must have easements, be certified as sustainable forests (Forest Stewardship Council or Sustainable Forestry Initiative systems), use native species, and show that carbon credits are both additional (beyond existing forest area) and permanent. The California market includes forest management, and aspects of credit calculation were reviewed. Types of sequestration projects include avoided deforestation (protected from imminent development), avoided damage from pests and pathogens, afforestation, forest management/wood products that result in increased/longer stored C, and forest reserves. Afforestation projects are estimated to reduce 2.2-9.5 tonnes of CO_2 /acre/year over 90-120 years. Demonstration of how to include private forest landowners in carbon accounting has begun in Maine, and the processes for certification and planning eligible forest management activities was reviewed. Key ingredients for including forest in CO2 markets were identified as: 1) Credibility (developing strategies that lead to real increases in C storage), 2) Viability (taking advantage of existing programs and keeping it simple), 3)Applicability (model practices for each strategy), 4) Complementarity (co-benefits of forest strategies, from sustainable management and reserves to end products with long-term C storage), and 5) Eligibility (tie program to the regional market). On a state basis, Maryland would need to model strategies for increased growth and yield from forest management, define where those strategies are suitable, and develop programs to support delivery of the strategies.

Transferable Development Rights Programs (TDR and PDR)- Dr. Dave Brownlee, Calvert Co.

Dr. Brownlee gave an overview of the rural land conservation policies used in Calvert County and progress made in conserving forest land. The County established a transferable development rights (TDR) program in 1978, and established other supporting policies including town center zoning, adequate public facilities ordinance, and mandatory clustering. The County TDR program added a Purchase and Retirement program in 1995, allowing the use of County funds to purchase development rights (PDR) rather than transferring them to a receiving area. The County uses purchases TDRs to encourage entry into the program and assure that key rural lands are protected. An annual installment payment program with tax-free interest, rather than lump sum purchases, has helped the county afford more acreage conserved. State programs also used to conserve forest include Maryland Agricultural Land Preservation Foundation, Rural Legacy, and Maryland Environmental Trust. The County has preserved 38% of its rural area (76% of county) so far. Development rights values have reached an average of $7,800/acre, with up to $11,000/acre seen on forested parcels that can be used to meet Forest Conservation Act requirements as well as density purchase needs.

Calvert County has set a goal of 40,000 acres of rural land protected from development, and over 24,700 acres have been preserved so far. The TDR program has provided by far the largest acreage, with 12,220 acres. PDR has added 5,450 acres, and MALPF, 4,650 acres. Rural Legacy has funded easements on more than 1,630 acres, and MET has accepted donated easements of 710 acres.

Bay Bank- Forestry for the Bay- James Remuzzi, Alliance for the Chesapeake Bay

James Remuzzi presented information on the Forestry for the Bay program and one of the ideas being generated through the program, the Bay Bank. Forestry for the Bay is a web-based initiative that is intended to connect forest landowners, particularly ones with smaller parcels that are not served by other technical assistance, with information on forest management and expanding access to environmental service markets. It will include: 1) a coached stewardship planning tool; 2) a registry for private forest land (determines eligibility for different types of markets); 3) direction on sources for technical and financial assistance; and 4) a platform for information, implementation, and incentives. Forestry for the Bay would provide information to landowners on the potential for a variety of income sources, from traditional fiber markets to emerging environmental services markets and from tax incentives to financial assistance. Future markets could include carbon, water quality trading, forest mitigation banking, conservation banking, and wetland banking. The draft website is available by direct link to www.acb-online.org/bay_forest/index.cfm and comments are welcome. With the spatial land registry, landowners can print a property map from an aerial photo, and a web mapping tool is planned that could calculate potentially tradable benefits for carbon, water quality, etc.

The Bay Bank is being established to facilitate environmental services market access for private landowners. The Bay Bank would aggregate the potential tradable credits calculated for Forestry for the Bay participants for: riparian buffers, other afforestation, forest management, forest mitigation banking, water quality credits, conservation banking, wetland banking, and carbon sequestration. There are numerous steps to moving forward with the concept, envisioned as a nonprofit organization with a board and staff. The Bay Bank would establish trading protocols that meet the quality and reliability standards of the markets in which they want to participate, and serve as an intermediary between landowners and the complex environmental services markets.

Trees and Air Quality Regulations- Gary Allen, Center for Chesapeake Communities

Trees contribute to lower air pollution, particularly through reducing the heat island effect. Expansion of tree canopy is being included in the Baltimore and DC State Implementation Plans (SIP) to meet air quality standards for ozone. They are listed as a voluntary innovative measure, for which current credit in ozone reduction is not taken. As the tree canopy grows further, some credit could be taken in future SIPs, which are redone on a 3-year cycle. Trees will not be used to substitute for emissions reductions efforts, but are looked at to contribute to maintaining air quality standards once lowered to meet air quality standards.

Discussion

Contribution of markets to conserving forest

Based on information from the presentations, different markets or mechanisms would be more likely to fund restoration of forests rather than conservation. Water quality trading would most likely be focused on afforestation. Source water protection or water supply planning could involve conservation of existing forest to protect infiltration capacity and limit demand. If antidegradation policies are developed and implemented, forest conservation could play a significant role. The regional carbon market currently focuses on afforestation, but work could be undertaken to make the case for including forest management options, which would encourage retention of existing forest. Virginia has had good success with marketable tax credits from donated easements, an idea that was reported to be in development for Maryland by MET and The Nature Conservancy.

Goal options for protection, working landscape, and urban forest elements

Comments on goal options included strong support for maintaining or increasing current levels of forest in Maryland. Slowing the loss was considered insufficient. No net loss of those forests most important for water quality (particularly the buffers, wetlands, and steep slopes) was suggested. The possibility of thresholds on an 8-digit state watershed scale could be considered. Forest areas at risk should be identified by watershed. For the targeting approach, more explanation of the science behind the water quality factors and the nexus between the GIS layer and water quality effect is needed.

Don Outen with Baltimore County Department of Environmental Protection and Resource Management presented an analysis of county lands protected through rural zoning categories that limit likely future development. These lands are not shown as protected in GIS, but meaningful protection does exist through local ordinances. He also presented an approach to consider forest blocks relative to the length of stream or shoreline protected, more clearly linking the forest size and water quality nexus.

Expansion of forest in the urban core was suggested to take advantage of stormwater and air quality benefits available in that location. Urban canopy goals should be used to implement urban forest expansion.

Regulations and tax incentives were considered key issues to address to retain working forests in Maryland. The slow process for harvest permits is a strong disincentive, especially coupled with declining timber values, no new sources of income, and rising costs of doing business. The Delaware example of no property taxes for land under a forest management plan should be considered. If the estate tax exclusion remains at 2 million, that could help the loss of forest with inheritance, but if it is not renewed, then it remains a significant barrier to conserving forests. Income tax credits for the cost of developing a forest management plan were suggested.

Additional markets for forest products or services were seen as critical to maintaining forest land use, particularly in large blocks of private forest. The carbon market accepting forest management credits is paying prices that are too low (e.g., $5/ton) to be a good incentive. Moving beyond a voluntary market in the US could increase demand and price, but only voluntary markets are anticipated for the near future. Bioenergy has some potential for new markets for low quality wood. The State has a renewable energy portfolio, but wood is not currently a large part of that.

Green Fund impervious surface fees and limits on residential development are helpful for maintaining resource lands and viable rural industries.

Attendance:

Gary	Allen	Center for Chesapeake Communities	gallenbay@aol.com
Vince	Berg	Forestry and Conservation Inc.	bergvh@erols.com
David	Brownlee	Calvert County Planning and Zoning	brownldc@co.cal.md.us
Steven	Bunker	The Nature Conservancy	sbunker@tnc.org
Pam	Bush	Program Open Space, Rural Legacy	pbush@dnr.state.md.us
Sally	Claggett	USFS Chesapeake Bay Liaison	sclaggett@fs.fed.us
Christine	Conn	MD DNR Watershed Services	cconn@dnr.state.md.us
Kevin	Coyne	MD DNR Ecosystem Assessment	kjcoyne@dnr.state.md.us
Bill	Crouch	The Conservation Fund	bcrouch@mdtcf.org
David	Curson	Audubon	dcurson@audubon.org
Nevin	Dawson	MD Cooperative Extension	ndawson@umd.edu
Robert	Feldt	MD DNR Forest Service	rfeldt@dnr.state.md.us
Jim	George	MDE	jgeorge@dnr.state.md.us
Anne	Hairston-Strang	MD DNR Forest Service	astrang@dnr.state.md.us
Chris	Holmes	MD Forests Association	cholmes@toad.net
Marian	Honeczy	MD DNR Forest Service	mhoneczy@dnr.state.md.us
Jeff	Horan	MD DNR Forest Service	jhoran@dnr.state.md.us
Ken	Jolly	MD DNR Forest Service	kjolly@dnr.state.md.us
Steve	Koehn	MD DNR Forest Service	skoehn@dnr.state.md.us
Tim	Larney	MD DNR Wildlife & Heritage Service	tlarney@dnr.state.md.us
Louise	Lawrence	MDA, Resource Conservation	LawrenL@mda.state.md.us
Lori	Lynch	University of MD	llynch@arec.umd.edu
Jonathan	McKnight	MD DNR Wildlife & Heritage Service	jmcknight@dnr.state.md.us
Patrick	Meckley	MD DNR Forest Service	pmeckley@dnr.state.md.us
Dan	Murphy	US Fish&Wildlife Service	dan_murphy@fws.gov
Mel	Noland	Forest Boards	mlnoland@bcpl.net
Don	Outen	Baltimore DEPRM	douten@baltimorecountymd.gov
Royden	Powell	MD Dept. Agriculture	powellrn@mda.state.md.us
Will	Price	Pinchot Institute	willprice@pinchot.org
James	Remuzzi	Alliance for the Chesapeake Bay	jremuzzi@chesapeakebay.net
Kirk	Rodgers	MD Forests Association	kirkrodgers@msn.com
Vera Mae	Schultz	MALPF & MD Tree Farm System	atreefarmer@verizon.net
Eric	Sprague	Pinchot Institute	esprague@pinchot.org
Don	VanHassent	MD DNR Forest Service	dvanhassent@dnr.state.md.us